



Tehag

Diesel Emission Management

1 The Catalysator– Wallflow – Filter

The “CWF” Particulate Filter exist of a ceramic “Wall Flow” monolith, which is coated with a special formulated coating with precious metals. This coating is especially developed to minimize the increase of NO₂, well known with all passive filter systems.

The reduction rate of Diesel–particulate (PM) as well as the gaseous harmful Carbonmonoxyd (CO) and Hydrocarbons (HC) is much more higher than most of the regulations require.

The filter monolith is contained in a stainless steel housing by using a thermal resistant isolation. A strong construction with an easy to handle design will guarantee long durability.

2 Operation

The CWF system has been specifically designed to operate where the “Duty Cycle” of the diesel engine is operating at low temperatures (250°C –350°C) and need no external energy for regeneration.

The catalyst coating on the Filter element effectively lowers the “Light Off” temperature at which soot particles will combust. Therefore it promotes continuous and automatic regeneration of the soot particles that have been collected within the filter element.

The particles will be trapped and together with the gaseous contents dramatically reduce by using an oxidation process.

The filtration process is based on the so called “wall Flow” principle. The exhaust gas has to pass through the very thin walls (0,4 mm) of the channels. The soot particles will be retained and oxidized on the surface of the channels.

The CWF filter has excellent sound attenuation characteristics for the removal of both high and low frequencies, and hence requires no further silencing.

To enable the system to function most effectively, it should be used in conjunction with the “Ultra Low Sulfur” Diesel Fuel (0.005%, NFE 590). The system can also be used on engines running with Standard Diesel Fuels having a sulfur content not exceeding 350ppm (NF EN 590), with an increase in sulfates emissions only if the exhaust gas temperature exceeds 350°C

3 Exhaust Temperatures

As the combustion process is dependent upon temperature, we recommend that wherever possible the vehicle should not be left idling for long periods of time.

The best range of temperature is between 250° and 350°C, 25% of the duty cycle the temperature should be > 275°C.

4 Installation

The CWF filter is designed to be a direct replacement for your existing silencer. Installation is quick and easy.

The product is supplied with complete with temperature and backpressure ports.

It is the responsibility of the operator to measure and record the backpressure of the system at the time of installation, and follow the cleaning procedure of the filter (as described below). Failure to do so may void the warranty.

The backpressure can be controlled by an easy to install electronical device with an optical or acusic instrument. We recommend the use of a data logging system to control temperature as well as beckpressure. The backpressure should not be higher than 150 millibar.

Please pay attention to our separate information **filtercontrol** or ask for help.

5 Cleaning and Maintenance

The CWF filter module must be cleaned annually, every twelve- (12) months, according to the following procedure. Failure to follow this procedure may void the warranty.

Before removing the DPX Centerbody for cleaning, mark the exhaust side (outlet) of the unit.

Remove the centerbody and then blow with oil- and waterfree air from the outlet side of the unit until minimum soot is detected.

Replace the DPX Centerbody on the vehicle in the same flow direction from which it was removed.

We do not recommend cleaning CWF units with steam and / or other detergents. Use of these products may damage and / or deactivate the filter unit.

We highly recommend the use of mask, gloves and safety glasses during cleaning procedure. The best and safest way is ti use a **filter cleaning unit**. Ask for special information.

Before normal operations are resumed, a backpressure and opacity reading should be recorded along with the Part Number/Serial number of the Filter, and the mileage and date the maintenance took place.

Following cleaning some smoke may be emitted initially, but this will rapidly disperse.

Having removed the soot and ash particles the filtermodule should be replace in the original exhaust flow dierction.

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